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TESORO

Tesoro Refining & Marketing Company LLC
150 Solano Way
Martinez, CA 94553-1487

Mr. Wayne Kino
Director of Compliance and Enforcement
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, California 94105

SUBJECT: Tesoro Martinez Refinery Title V Semi-Annual Monitoring Report
Reporting Period: January 1, 2017 to June 30, 2017
Plant #B2758 & #B2759

Dear Mr. Kino:

Pursuant to the requirements outlined in Section I, Standard Conditions, Part F. of the Tesoro Refining and Marketing Company Title V Permit, issued on January 11, 2016, the attached document includes information for the above reference reporting period. The Semi-Annual Monitoring report consists of two parts. The first part summarizes all of the Inoperative Monitors reported for the reporting period; the second part summarizes all the Title V deviations reported for the reporting period. This Title V Semi-Annual Monitoring Report contains the signature of Tesoro's responsible official, Mr. Thomas A. Lu, as required by Regulation 2-6-502, and by 40 CFR Part 70.6.

For questions, please contact David Chetkowski of my staff at (925) 335-3451.

Sincerely,

Matthew W. Buell
Manager, Environmental

MWB/DMC/kds

Attachment

cc: (via e-mail)
Mr. Ray Salilila, BAAQMD Enforcement Inspector

Tesoro Martinez Refinery
Inoperative Monitors
Reporting Period: 1/1/2017 to 6/30/2017

Inoperative Monitors as defined by BAAQMD Regulations 1-522 and 1-523
for the reporting period are summarized below:

Date	IMF ID#	Unit	Pollutant / Parameter
1/3/2017	A56219 ^(a)	7 Boiler	SO ₂
1/12/2017	07B82	Coker Flare	H ₂ S
2/3/2017	07C11	ARU Flare	Flowrate
2/7/2017	07C22	50 Unit Flare	THC
2/11/2017	07C23	Sulfur Recovery Unit	SO ₂
2/14/2017	07C31	3 Reformer	O ₂
2/23/2017	07C41	50 Unit Flare	THC
3/7/2017	07C53	Furnace F-26	NO _x
3/21/2017	07C64	Chenery GLM Site	SO ₂
3/31/2017	07C73	Furnace F-53	CO
4/15/2017	07D98 ^(b)	Sulfur Recovery Unit	SO ₂
5/16/2017	07D32	Sulfuric Acid Plant	SO ₂
6/12/2017	07D64	Furnaces F-19 & F-20	NO _x
6/15/2017	07D65	Furnace F-22	NO _x
6/23/2017	07D67	Chenery GLM Site	SO ₂

^(a) Failed RATA. NOV# A56219 was subsequently issued.

^(b) Reported to the District upon discovery on 7/25/2017.

Certification Statement

I certify under penalty of law that based on the information and belief formed after reasonable inquiry, the statements and information in this document and in all attachments and other materials are true, accurate and complete



Signature of Responsible Official

MWD

Vice President, Martinez Refinery

Title

7/27/2017
Date

BAAQMD Title V Permit Semi-Annual Monitoring Report					
January-17 -- June-17					
B2758 & B2759 – Tesoro Martinez Refinery and Amoco Terminal					
<u>Facility Address:</u> 150 Solano Way City: Martinez State: CA Zip Code: 94553			<u>Mailing Address:</u> 150 Solano Way City: Martinez State: CA Zip Code: 94553		
<u>Contact:</u> Matthew Buell			<u>Title:</u> Environmental Manager		
			<u>Phone:</u> 925 - 370 - 3275		
Applicable Regulation / Permit Condition / Other: <u>Title V-VI(11433)(16)</u>					
Date Event Started:	Date Event Stopped:				
<u>01/03/2017</u>	<u>01/13/2017</u>	Source (S#): <u>S901</u>	Abatement Device (A#): <u>A30</u>	Emission Point (P#):	
<p>Event Description: The SO2 CEMS on the 7Boiler stack (S-901) failed a Relative Accuracy Test Audit (RATA) that was performed on 12/20/2016. The refinery received verbal notification of the failed audit on 1/3/2017. A follow-up audit was performed on 1/12/2017. NOV #A56219 was issued on 5/5/2017 for failure to maintain the SO2 monitor.</p>					
<p><u>Probable Cause:</u></p> <p>The contractor performing the RATA used a laboratory-based method, rather than a CEMS-based method, and used a sample train that was not equipped with an ammonia scrubber to prevent fouling. Comparing grab sample results (lab method) to the refinery's real-time CEMS data introduced excess error into the audit, leading to failure of the RATA. In addition, SO2 emissions from 7Boiler are inherently low; small differences in monitored emissions result in high percentage differences, also contributing to the failure of the RATA.</p>					
<p><u>Corrective Action or Preventive Steps Taken:</u></p> <p>A follow-up RATA was performed on 1/12/2017 utilizing a CEMS-based (real-time) methodology. The contractor also used a sample train with an ammonia scrubber, similar to the CEMS sample train utilized by the 7Boiler CEMS. A CEMS-based methodology will be used for all future RATAs. The refinery believes that the laboratory-based methodology selected by the first contractor directly led to the failed RATA.</p>					

Applicable Regulation / Permit Condition / Other:

BAAQMD 9-2-301Date Event
Started: Date Event
Stopped:01/12/201701/12/2017Source (S#): B2758

Abatement Device (A#):

Emission Point (P#):

Event Description: Intermittent periods of elevated ambient concentrations were monitored at the Pacheco Slough GLM location on 1/12/2017. Wind speeds were low (2-6 mph) and blowing from the north (i.e., N / NE / NW). The excess was reported to the District as RCA 07B81 on 1/13/2017.

Probable Cause:

There are no Refinery process operations north of the GLM site that are potential sources of H₂S. The elevated ambient concentrations detected at the GLM are believed to have been caused by sulfur compounds (such as mercaptans, sulfides, and thiophene compounds) released during soil stabilization activities being performed on a legacy waste management unit adjacent to the GLM site. The activities were occurring upwind of the GLM at the time the excess occurred. Data collected by a second H₂S monitor installed at the GLM site detected ambient H₂S concentrations that were much lower than regulatory standards, supporting the refinery's belief that the excess measured by the GLM was actually caused by other sulfur compounds (i.e., not H₂S). The second H₂S monitor uses a detection methodology (lead acetate tape) that differs from the methodology used by the GLM.

Corrective Action or Preventive Steps Taken:

Water and odor suppressants are continuously applied to disturbed soil areas in an effort to minimize the evolution of odorous compounds. Ambient concentrations monitored by the GLM decrease after daily soil stabilization activities cease. The soil stabilization activities are being performed pursuant to a court order that compels the Refinery to continue the activities in the vicinity of the GLM until the area is completely stabilized to minimize environmental risk to nearby sensitive areas.

Applicable Regulation / Permit Condition / Other:

BAAQMD 9-2-301Date Event
Started: Date Event
Stopped:01/17/201701/17/2017Source (S#): B2758

Abatement Device (A#):

Emission Point (P#):

Event Description: Intermittent periods of elevated ambient concentrations were monitored at the Pacheco Slough GLM location on 1/17/2017. Wind speeds were between 4 and 12 mph, and blowing primarily from the northeast. The excess was reported to the District as RCA 07B87 on 1/18/2017.

Probable Cause:

There are no Refinery process operations north of the GLM site that are potential sources of H₂S. The elevated ambient concentrations detected at the GLM are believed to have been caused by sulfur compounds (such as mercaptans, sulfides, and thiophene compounds) released during soil stabilization activities being performed on a legacy waste management unit adjacent to the GLM site. The activities were occurring upwind of the GLM at the time the excess occurred. Data collected by a second H₂S monitor installed at the GLM site detected ambient H₂S concentrations that were much lower than regulatory standards, supporting the refinery's belief that the excess measured by the GLM was actually caused by other sulfur compounds (i.e., not H₂S). The second H₂S monitor uses a detection methodology (lead acetate tape) that differs from the methodology used by the GLM.

Corrective Action or Preventive Steps Taken:

Water and odor suppressants are continuously applied to disturbed soil areas in an effort to minimize the evolution of odorous compounds. Ambient concentrations monitored by the GLM decrease after daily soil stabilization activities cease. The soil stabilization activities are being performed pursuant to a court order that compels the Refinery to continue the activities in the vicinity of the GLM until the area is completely stabilized to minimize environmental risk to nearby sensitive areas.

Applicable Regulation / Permit Condition / Other:

BAAQMD 9-2-301Date Event
Started:Date Event
Stopped:01/18/201701/18/2017Source (S#): B2758

Abatement Device (A#):

Emission Point (P#):

Event Description: Intermittent periods of elevated ambient concentrations were monitored at the Pacheco Slough GLM location on 1/18/2017. Wind speeds were between 4 and 12 mph, and blowing primarily from the northeast. The excess was reported to the District as RCA 07B88 on 1/19/2017.

Probable Cause:

There are no Refinery process operations north of the GLM site that are potential sources of H₂S. The elevated ambient concentrations detected at the GLM are believed to have been caused by sulfur compounds (such as mercaptans, sulfides, and thiophene compounds) released during soil stabilization activities being performed on a legacy waste management unit adjacent to the GLM site. The activities were occurring upwind of the GLM at the time the excess occurred. Data collected by a second H₂S monitor installed at the GLM site detected ambient H₂S concentrations that were much lower than regulatory standards, supporting the refinery's belief that the excess measured by the GLM was actually caused by other sulfur compounds (i.e., not H₂S). The second H₂S monitor uses a detection methodology (lead acetate tape) that differs from the methodology used by the GLM.

Corrective Action or Preventive Steps Taken:

Water and odor suppressants are continuously applied to disturbed soil areas in an effort to minimize the evolution of odorous compounds. Ambient concentrations monitored by the GLM decrease after daily soil stabilization activities cease. The soil stabilization activities are being performed pursuant to a court order that compels the Refinery to continue the activities in the vicinity of the GLM until the area is completely stabilized to minimize environmental risk to nearby sensitive areas.

Applicable Regulation / Permit Condition / Other:

BAAQMD 9-2-301Date Event
Started:Date Event
Stopped:01/25/201701/25/2017Source (S#): B2758

Abatement Device (A#):

Emission Point (P#):

Event Description: Intermittent periods of elevated ambient concentrations were monitored at the Pacheco Slough GLM location on 1/25/2017. Wind speeds were between 3 and 6 mph, and blowing primarily from the east and northeast. The excess was reported to the District as RCA 07B97 on 1/26/2017.

Probable Cause:

There are no Refinery process operations north of the GLM site that are potential sources of H₂S. The elevated ambient concentrations detected at the GLM are believed to have been caused by sulfur compounds (such as mercaptans, sulfides, and thiophene compounds) released during soil stabilization activities being performed on a legacy waste management unit adjacent to the GLM site. The activities were occurring upwind of the GLM at the time the excess occurred. Data collected by a second H₂S monitor installed at the GLM site detected ambient H₂S concentrations that were much lower than regulatory standards, supporting the refinery's belief that the excess measured by the GLM was actually caused by other sulfur compounds (i.e., not H₂S). The second H₂S monitor uses a detection methodology (lead acetate tape) that differs from the methodology used by the GLM.

Corrective Action or Preventive Steps Taken:

Water and odor suppressants are continuously applied to disturbed soil areas in an effort to minimize the evolution of odorous compounds. Ambient concentrations monitored by the GLM decrease after daily soil stabilization activities cease. The soil stabilization activities are being performed pursuant to a court order that compels the Refinery to continue the activities in the vicinity of the GLM until the area is completely stabilized to minimize environmental risk to nearby sensitive areas.

Applicable Regulation / Permit Condition / Other:

BAAQMD 9-2-301Date Event
Started:Date Event
Stopped:01/26/201701/26/2017Source (S#): B2758

Abatement Device (A#):

Emission Point (P#):

Event Description: Intermittent periods of elevated ambient concentrations were monitored at the Pacheco Slough GLM location on 1/26/2017. Wind speeds were between 2 and 4 mph, and blowing primarily from the east and northeast. The excess was reported to the District as RCA 07C00 on 1/27/2017.

Probable Cause:

There are no Refinery process operations north of the GLM site that are potential sources of H2S. The elevated ambient concentrations detected at the GLM are believed to have been caused by sulfur compounds (such as mercaptans, sulfides, and thiophene compounds) released during soil stabilization activities being performed on a legacy waste management unit adjacent to the GLM site. The activities were occurring upwind of the GLM at the time the excess occurred. Data collected by a second H2S monitor installed at the GLM site detected ambient H2S concentrations that were much lower than regulatory standards, supporting the refinery's belief that the excess measured by the GLM was actually caused by other sulfur compounds (i.e., not H2S). The second H2S monitor uses a detection methodology (lead acetate tape) that differs from the methodology used by the GLM.

Corrective Action or Preventive Steps Taken:

Water and odor suppressants are continuously applied to disturbed soil areas in an effort to minimize the evolution of odorous compounds. Ambient concentrations monitored by the GLM decrease after daily soil stabilization activities cease. The soil stabilization activities are being performed pursuant to a court order that compels the Refinery to continue the activities in the vicinity of the GLM until the area is completely stabilized to minimize environmental risk to nearby sensitive areas.

Applicable Regulation / Permit Condition / Other:

BAAQMD 9-2-301Date Event
Started:Date Event
Stopped:01/27/201701/27/2017Source (S#): B2758

Abatement Device (A#):

Emission Point (P#):

Event Description: Intermittent periods of elevated ambient concentrations were monitored at the Pacheco Slough GLM location on 1/27/2017. Wind speeds were between 2 and 6 mph, and blowing primarily from the east and northeast. The excess was reported to the District as RCA 07C02 on 1/27/2017.

Probable Cause:

There are no Refinery process operations north of the GLM site that are potential sources of H2S. The elevated ambient concentrations detected at the GLM are believed to have been caused by sulfur compounds (such as mercaptans, sulfides, and thiophene compounds) released during soil stabilization activities being performed on a legacy waste management unit adjacent to the GLM site. The activities were occurring upwind of the GLM at the time the excess occurred. Data collected by a second H2S monitor installed at the GLM site detected ambient H2S concentrations that were much lower than regulatory standards, supporting the refinery's belief that the excess measured by the GLM was actually caused by other sulfur compounds (i.e., not H2S). The second H2S monitor uses a detection methodology (lead acetate tape) that differs from the methodology used by the GLM.

Corrective Action or Preventive Steps Taken:

Water and odor suppressants are continuously applied to disturbed soil areas in an effort to minimize the evolution of odorous compounds. Ambient concentrations monitored by the GLM decrease after daily soil stabilization activities cease. The soil stabilization activities are being performed pursuant to a court order that compels the Refinery to continue the activities in the vicinity of the GLM until the area is completely stabilized to minimize environmental risk to nearby sensitive areas.

Applicable Regulation / Permit Condition / Other:

BAAQMD 9-2-301Date Event
Started:Date Event
Stopped:01/28/201701/28/2017Source (S#): B2758

Abatement Device (A#):

Emission Point (P#):

Event Description: Intermittent periods of elevated ambient concentrations were monitored at the Pacheco Slough GLM location on 1/28/2017. Wind speeds were between 2 and 12 mph, and blowing primarily from the east and northeast. The excess was reported to the District as RCA 07C03 on 1/30/2017.

Probable Cause:

There are no Refinery process operations north of the GLM site that are potential sources of H2S. The elevated ambient concentrations detected at the GLM are believed to have been caused by sulfur compounds (such as mercaptans, sulfides, and thiophene compounds) released during soil stabilization activities being performed on a legacy waste management unit adjacent to the GLM site. The activities were occurring upwind of the GLM at the time the excess occurred. Data collected by a second H2S monitor installed at the GLM site detected ambient H2S concentrations that were much lower than regulatory standards, supporting the refinery's belief that the excess measured by the GLM was actually caused by other sulfur compounds (i.e., not H2S). The second H2S monitor uses a detection methodology (lead acetate tape) that differs from the methodology used by the GLM.

Corrective Action or Preventive Steps Taken:

Water and odor suppressants are continuously applied to disturbed soil areas in an effort to minimize the evolution of odorous compounds. Ambient concentrations monitored by the GLM decrease after daily soil stabilization activities cease. The soil stabilization activities are being performed pursuant to a court order that compels the Refinery to continue the activities in the vicinity of the GLM until the area is completely stabilized to minimize environmental risk to nearby sensitive areas.

Applicable Regulation / Permit Condition / Other:

BAAQMD 9-2-301Date Event
Started:Date Event
Stopped:01/30/201701/30/2017Source (S#): B2758

Abatement Device (A#):

Emission Point (P#):

Event Description: Intermittent periods of elevated ambient concentrations were monitored at the Pacheco Slough GLM location on 1/30/2017. Wind speeds were between 2 and 10 mph, and blowing primarily from the east and northeast. The excess was reported to the District as RCA 07C04 on 1/31/2017.

Probable Cause:

There are no Refinery process operations north of the GLM site that are potential sources of H2S. The elevated ambient concentrations detected at the GLM are believed to have been caused by sulfur compounds (such as mercaptans, sulfides, and thiophene compounds) released during soil stabilization activities being performed on a legacy waste management unit adjacent to the GLM site. The activities were occurring upwind of the GLM at the time the excess occurred. Data collected by a second H2S monitor installed at the GLM site detected ambient H2S concentrations that were much lower than regulatory standards, supporting the refinery's belief that the excess measured by the GLM was actually caused by other sulfur compounds (i.e., not H2S). The second H2S monitor uses a detection methodology (lead acetate tape) that differs from the methodology used by the GLM.

Corrective Action or Preventive Steps Taken:

Water and odor suppressants are continuously applied to disturbed soil areas in an effort to minimize the evolution of odorous compounds. Ambient concentrations monitored by the GLM decrease after daily soil stabilization activities cease. The soil stabilization activities are being performed pursuant to a court order that compels the Refinery to continue the activities in the vicinity of the GLM until the area is completely stabilized to minimize environmental risk to nearby sensitive areas.

Applicable Regulation / Permit Condition / Other:

Title V-VI(11433)(2)Date Event
Started: Date Event
Stopped:01/31/201701/31/2017Source (S#): S802Abatement Device (A#): A30, S901

Emission Point (P#):

Event Description: A particulate matter test was not completed during the month of January 2017 as required by Condition 11433, Part 2.

Probable Cause:

Sample ports were ceased shut and all attempts to safely open the ports prior to the day that testing was originally scheduled (1/27/2017) had been unsuccessful. Alternative sample ports were identified; however, additional staging was needed to safely access the alternative ports. The testing crew communicated that they would return on 1/30/2017 to perform the test after staging was completed. Testing crew did not return on 1/30/2017 as had been agreed to, nor did they return on 1/31/2017. Additional testing companies were contacted; however, no testing crew was available to perform the test.

Corrective Action or Preventive Steps Taken:

New stack test ports have been engineered and are scheduled to be installed during the next unit turnaround. Tesoro believes that the permit condition requiring monthly particulate matter testing is obsolete and will be requesting that it be changed to require less frequent testing.

Applicable Regulation / Permit Condition / Other:

BAAQMD 9-2-301Date Event
Started: Date Event
Stopped:01/31/201701/31/2017Source (S#): B2758

Abatement Device (A#):

Emission Point (P#):

Event Description: Intermittent periods of elevated ambient concentrations were monitored at the Pacheco Slough GLM location on 1/31/2017. Wind speeds were between 2 and 12 mph, and blowing primarily from the east and northeast. The excess was reported to the District as RCA 07C05 on 1/31/2017.

Probable Cause:

There are no Refinery process operations north of the GLM site that are potential sources of H2S. The elevated ambient concentrations detected at the GLM are believed to have been caused by sulfur compounds (such as mercaptans, sulfides, and thiophene compounds) released during soil stabilization activities being performed on a legacy waste management unit adjacent to the GLM site. The activities were occurring upwind of the GLM at the time the excess occurred. Data collected by a second H2S monitor installed at the GLM site detected ambient H2S concentrations that were much lower than regulatory standards, supporting the refinery's belief that the excess measured by the GLM was actually caused by other sulfur compounds (i.e., not H2S). The second H2S monitor uses a detection methodology (lead acetate tape) that differs from the methodology used by the GLM.

Corrective Action or Preventive Steps Taken:

Water and odor suppressants are continuously applied to disturbed soil areas in an effort to minimize the evolution of odorous compounds. Ambient concentrations monitored by the GLM decrease after daily soil stabilization activities cease. The soil stabilization activities are being performed pursuant to a court order that compels the Refinery to continue the activities in the vicinity of the GLM until the area is completely stabilized to minimize environmental risk to nearby sensitive areas.

Applicable Regulation / Permit Condition / Other:

BAAQMD 9-2-301Date Event
Started:Date Event
Stopped:02/01/201702/01/2017Source (S#): B2758

Abatement Device (A#):

Emission Point (P#):

Event Description: Intermittent periods of elevated H₂S were monitored at the Pacheco Slough GLM location on 2/1/2017. Wind speeds were between 2 and 8 mph, and blowing primarily from the east and northeast. The excess was reported to the District as RCA 07C07 on 2/2/2017.

Probable Cause:

There are no Refinery process operations north of the GLM site that are potential sources of H₂S. The elevated H₂S concentrations detected at the GLM are believed to have been caused by sulfur compounds (such as mercaptans, sulfides, and thiophene compounds) released during soil stabilization activities being performed on a legacy waste management unit adjacent to the GLM site. The activities were occurring about 100 ft upwind of the GLM at the time the excess occurred. On 1/11/2017, the refinery co-located another H₂S analyzer (Galvanic Applied Sciences, Inc., Model 903W) at the GLM site that utilizes a detection method that is believed to be less susceptible to interferences from other sulfur compounds. Data collected by the Galvanic analyzer support the refinery's belief that the GLM is reporting false positive H₂S readings caused by other sulfur compounds. Tesoro believes that this reported exceedance was caused by false positive H₂S readings registered at the GLM.

Corrective Action or Preventive Steps Taken:

Monitored concentrations of H₂S at the GLM decrease after daily soil disturbance activities cease. The soil redistribution and hauling activities are being performed to comply with a court order that compels the Refinery to continue the activities in the vicinity of the GLM until the area is completely stabilized to minimize environmental risk to nearby sensitive areas.

Applicable Regulation / Permit Condition / Other:

BAAQMD 9-2-301Date Event
Started:Date Event
Stopped:02/02/201702/02/2017Source (S#): B2758

Abatement Device (A#):

Emission Point (P#):

Event Description: A brief period of elevated H₂S was monitored at the Pacheco Slough GLM location on 2/2/2017. Wind speeds were between 5 and 6mph, and blowing primarily from the east and northeast. The excess was reported to the District as RCA 07C08 on 2/2/2017.

Probable Cause:

There are no Refinery process operations north of the GLM site that are potential sources of H₂S. The elevated ambient concentrations detected at the GLM are believed to have been caused by sulfur compounds (such as mercaptans, sulfides, and thiophene compounds) released during soil stabilization activities being performed on a legacy waste management unit adjacent to the GLM site. The activities were occurring about 100 ft upwind of the GLM at the time the excess occurred. On 1/11/2017, the refinery co-located another H₂S analyzer (Galvanic Applied Sciences, Inc., Model 903W) at the GLM site that utilizes a detection method that is believed to be less susceptible to interferences from other sulfur compounds. Data collected by the Galvanic analyzer support the refinery's belief that the GLM is reporting false positive H₂S readings caused by other sulfur compounds. Tesoro believes that this reported exceedance was caused by false positive H₂S readings registered at the GLM.

Corrective Action or Preventive Steps Taken:

Monitored concentrations of H₂S at the GLM decrease after daily soil disturbance activities cease. The soil redistribution and hauling activities are being performed to comply with a court order that compels the Refinery to continue the activities in the vicinity of the GLM until the area is completely stabilized to minimize environmental risk to nearby sensitive areas.

Applicable Regulation / Permit Condition / Other:
40 CFR 60.482-6a(a)(1), 40 CFR 60.482-7a(c)(2), BAAQMD 8-18-302

Date Event
Started:

Date Event
Stopped:

02/08/2017

02/08/2017

Source (S#): B2758

Abatement Device (A#):

Emission Point (P#):

Event Description: A third-party audit of the refinery's LDAR program found five (5) open-ended lines without plugs installed; a database review found one (1) valve that was missed for follow-up monitoring after repair, and one (1) valve that was not identified as having been repaired even though follow-up monitoring confirms that a repair was made.

Probable Cause:

Plugs were not reinstalled on open-ended lines once the work on the lines was completed. The database errors that resulted in the missed follow-up monitoring of one valve, and the incorrect repair status of another valve were found to be caused by errors in the database software.

Corrective Action or Preventive Steps Taken:

Operators were reminded of the requirements for open-ended lines, and plugs were reinstalled on the open-ended lines during the third-party audit. Technical Support for the database software used by the refinery (GuideWare) was contacted by the refinery and the auditors upon discovery of the missed monitoring and incorrect repair status. The software errors that led to the last two findings were corrected during the audit.

Applicable Regulation / Permit Condition / Other:

Title V-VI(11433)(9)

Date Event
Started:

Date Event
Stopped:

02/28/2017

03/01/2017

Source (S#): S901

Abatement Device (A#):

Emission Point (P#):

Event Description: CO emissions exceeded 500 ppm @ 0% O2 during a period when the FCCU was shutdown, and then subsequently being restarted. The indicated excess was reported on 3/1/2017 as RCA 07C43. Per the refinery's Consent Decree, the emission limit does not apply during startup, shutdown, and malfunction. The exemption needs to be added to the Title V permit.

Probable Cause:

CO and O2 concentrations were in flux as the FCCU was shutdown, and then later restarted. USEPA and BAAQMD acknowledged that this emission limit may not be met during periods of startup, shutdown, and malfunction by including in the Consent Decree an exemption from the limit during those times.

Corrective Action or Preventive Steps Taken:

The exemption will be added to the refinery's Title V permit during permit renewal.

Applicable Regulation / Permit Condition / Other:

BAAQMD 1-522(6)

Date Event
Started:

Date Event
Stopped:

03/07/2017

On Going

Source (S#): S926

Abatement Device (A#):

Emission Point (P#):

Event Description: The NOX CEMS for Furnace F-26 failed a BAAQMD Field Accuracy Test (FAT) performed on 3/7/2017. An inoperative monitor report (RCA 07C53) was submitted on 3/8/2017. NOV #A56220 was issued on 5/5/2017 for failure to maintain the NOX monitor.

Probable Cause:

The converter tube for the NOX CEMS failed to completely convert all NO2 present in the flue gas to NO. This resulted in the underreporting of NOX emissions by the CEMS, and the failure of the field accuracy test.

Corrective Action or Preventive Steps Taken:

A new converter tube was ordered, and the CEMS was repaired upon delivery of the new converter tube. Following repair, the CEMS was calibrated and returned to operation.

Applicable Regulation / Permit Condition / Other:

BAAQMD 9-2-301Date Event
Started: Date Event
Stopped:03/09/201703/09/2017Source (S#): B2758

Abatement Device (A#):

Emission Point (P#):

Event Description: A brief period of elevated H₂S was monitored at the Pacheco Slough GLM location on 3/9/2017. Wind speeds were 1 - 10 mph, and blowing primarily from the north and northwest. The excess was reported to the District as RCA 07C56 on 3/10/2017.

Probable Cause:

There are no Refinery process operations north of the GLM site that are potential sources of H₂S. The elevated concentrations detected at the GLM are believed to have been caused by sulfur compounds (such as mercaptans, sulfides, and thiophene compounds) released during soil redistribution (i.e., grading and hauling) activities being performed adjacent to the GLM site in an area that is a legacy waste management unit. The activities were occurring about 100 ft upwind of the GLM at the time the excess occurred. On 1/11/2017, the refinery co-located another H₂S analyzer (Galvanic Applied Sciences, Inc., Model 903W) at the GLM site that utilizes a detection method that is believed to be less susceptible to interferences from other sulfur compounds. Data collected by the Galvanic analyzer support the refinery's belief that the GLM is reporting false positive H₂S readings caused by other sulfur compounds. Tesoro believes that this reported exceedance was caused by false positive H₂S readings registered at the GLM.

Corrective Action or Preventive Steps Taken:

Monitored concentrations of H₂S at the GLM decrease after daily soil disturbance activities cease. The soil redistribution and hauling activities are being performed to comply with a court order that compels the Refinery to continue the activities in the vicinity of the GLM until the area is completely stabilized to minimize environmental risk to nearby sensitive areas.

Applicable Regulation / Permit Condition / Other:

Title V-VI(8077)(B7)(A)Date Event
Started: Date Event
Stopped:04/14/201704/14/2017Source (S#): S922

Abatement Device (A#):

Emission Point (P#):

Event Description: An indicated excess of the NO_x limit on F-22 occurred on 4/14/2017, and was reported to the District as RCA 07C95. NO_x emissions peaked at 61 ppm @ 3% O₂ (8-hour average), with a limit of 60 ppm @ 3% O₂.

Probable Cause:

Furnace O₂ increased, resulting in an increase in corrected NO_x emissions. The furnace O₂ increased because Process Controls was troubleshooting the Advanced Process Control (APC) system on the debutanizer tower. The APC raised the furnace O₂ level because of adjustments made to the APC settings.

Corrective Action or Preventive Steps Taken:

Operators noticed the increase in NO_x emissions from the furnace, and the APC settings were readjusted to reduce O₂ levels in the furnace. Corrected NO_x emission rates decreased as the O₂ level in the furnace decreased.

Applicable Regulation / Permit Condition / Other:

BAAQMD 6-1-302Date Event
Started:Date Event
Stopped:04/21/201704/21/2017Source (S#): S802Abatement Device (A#): A30, S901

Emission Point (P#):

Event Description: At approximately 6:20 PM, three (3) transformers on the west electrostatic precipitator (ESP) controlling the FCCU and 7 Boiler tripped, de-energizing a portion of the west ESP. As a result, opacity exceeded 20% for more than three (3) minutes in any hour. The incident was reported to the District as RCA 07C99.

Probable Cause:

Catalyst build-up is suspected to have caused an electrical short that tripped the three transformers offline. The reduced power to the west ESP resulted in increased opacity. Opacity increased above 20% during periods when the rappers were rapping the collection plates located in the de-energized portions of the west ESP.

Corrective Action or Preventive Steps Taken:

FCCU rates were reduced, and electricians were called in to troubleshoot. Power was restored to two of the three transformers, and rapping was deactivated on the de-energized portions of the west ESP. Permanent repairs can be only be made upon safe entry into the west ESP. The permanent repairs are scheduled to occur during the next planned FCCU and 7 Boiler outage when safe entry into the ESP can occur.

Applicable Regulation / Permit Condition / Other:

BAAQMD 8-18-301Date Event
Started:Date Event
Stopped:05/25/201705/26/2017Source (S#): S649

Abatement Device (A#):

Emission Point (P#):

Event Description: An open-ended line was discovered near TK-649 (LDAR component ID# 29073) during a routine compliance inspection by BAAQMD on May 25, 2017. A Notice of Violation (NOV #A56223) was issued immediately following the inspection.

Probable Cause:

The plug was not replaced on the open-ended line prior to placing the line back into service.

Corrective Action or Preventive Steps Taken:

The plug was replaced, and Maintenance and Operations were reminded of the requirement to replace all plugs in open-ended lines before putting a line back into service. Monitoring conducted on 5/26/2017 confirmed that the open-ended line was not leaking.

Applicable Regulation / Permit Condition / Other:

BAAQMD 9-10-305, BAAQMD 1-522(6)

Date Event
Started:

Date Event
Stopped:

06/15/2017

06/24/2017

Source (S#): S922

Abatement Device (A#):

Emission Point (P#):

Event Description: Furnace F22 (S922) failed a District-performed FAT for NOX, and exceeded its CO emission limit. The FAT was performed on 6/15/2017. The failed FAT and CO exceedance were reported to the District as RCA 07D65.

Probable Cause:

CO emissions were elevated because the furnace was curtailed (i.e., operating < 30% of capacity).

The converter for the NOX CEMS failed to completely convert all NO2 present in the flue gas to NO. This resulted in the underreporting of NOX emissions by the CEMS, and the failure of the field accuracy test.

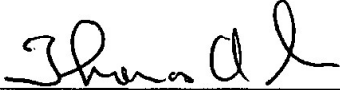
Corrective Action or Preventive Steps Taken:

Furnace firing rates were increased immediately following the FAT on 6/15/2017, reducing CO emissions.

A new converter tube was installed in the NOX CEMS on 6/19/2017. Following repair, the CEMS was calibrated and returned to operation. BEST Environmental performed a FAT on 6/24/2017, confirming that the CEMS repair corrected the problem with the NOX CEMS.

Certification Statement:

I certify under penalty of law that based on the information and belief formed after reasonable inquiry, the statements and information in this document and in all attachments and other materials are true, accurate, and complete.



Signature of Responsible Official

Thomas A. Lu

Print Name

Vice President,
Martinez Refinery

Title

7/27/2017

Date

nwb